

SRP

Summer Preparedness 2017

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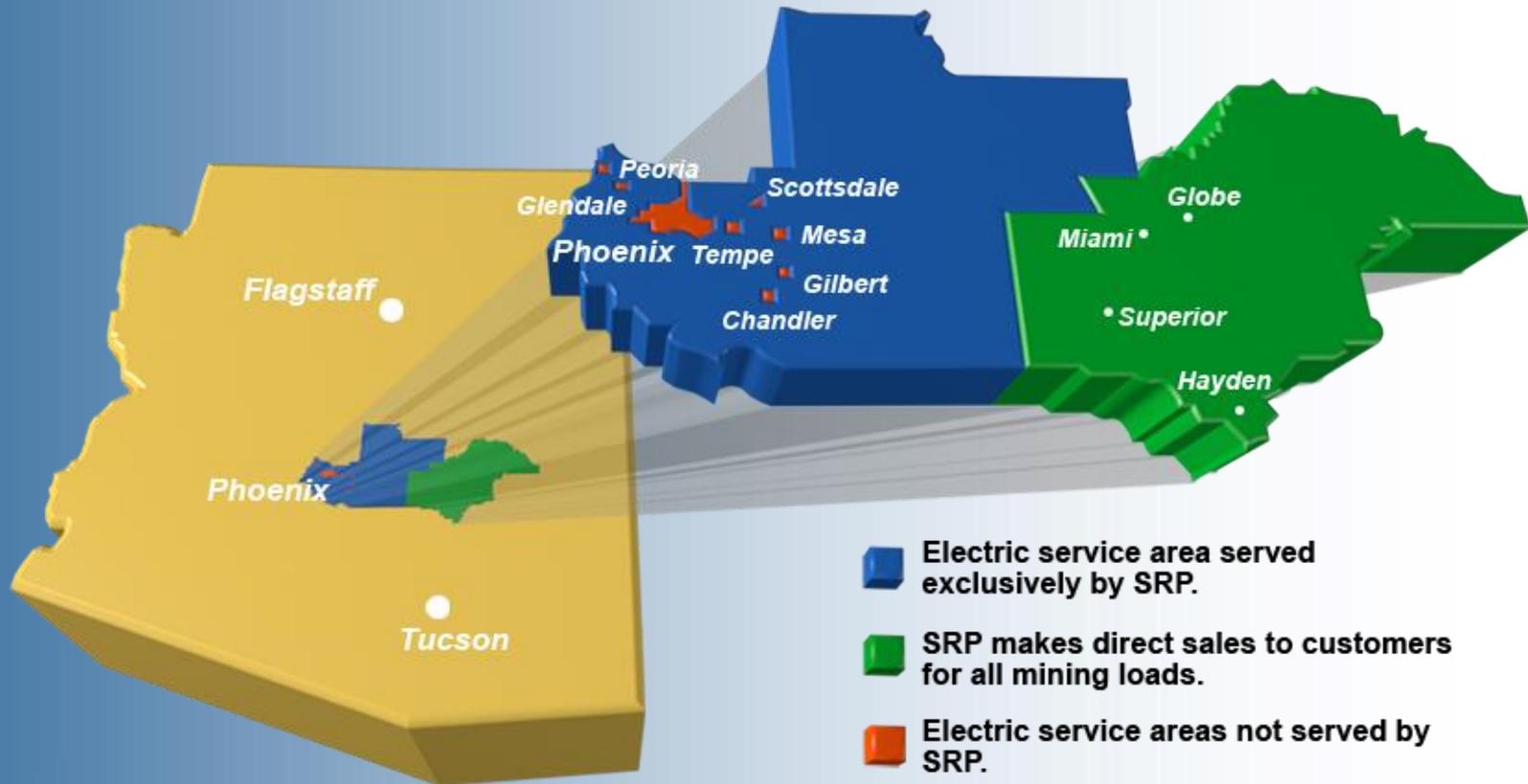
SRP's Electric System

- **Provide electricity to over 1 million power users in a 2,900 square-mile area in parts of 3 counties – Maricopa, Gila, and Pinal**

System Stats:

- **319 Substations**
- **3,309 Transmission Line Miles**
- **19,965 Distribution Line Miles**
- **46 Generation Units**

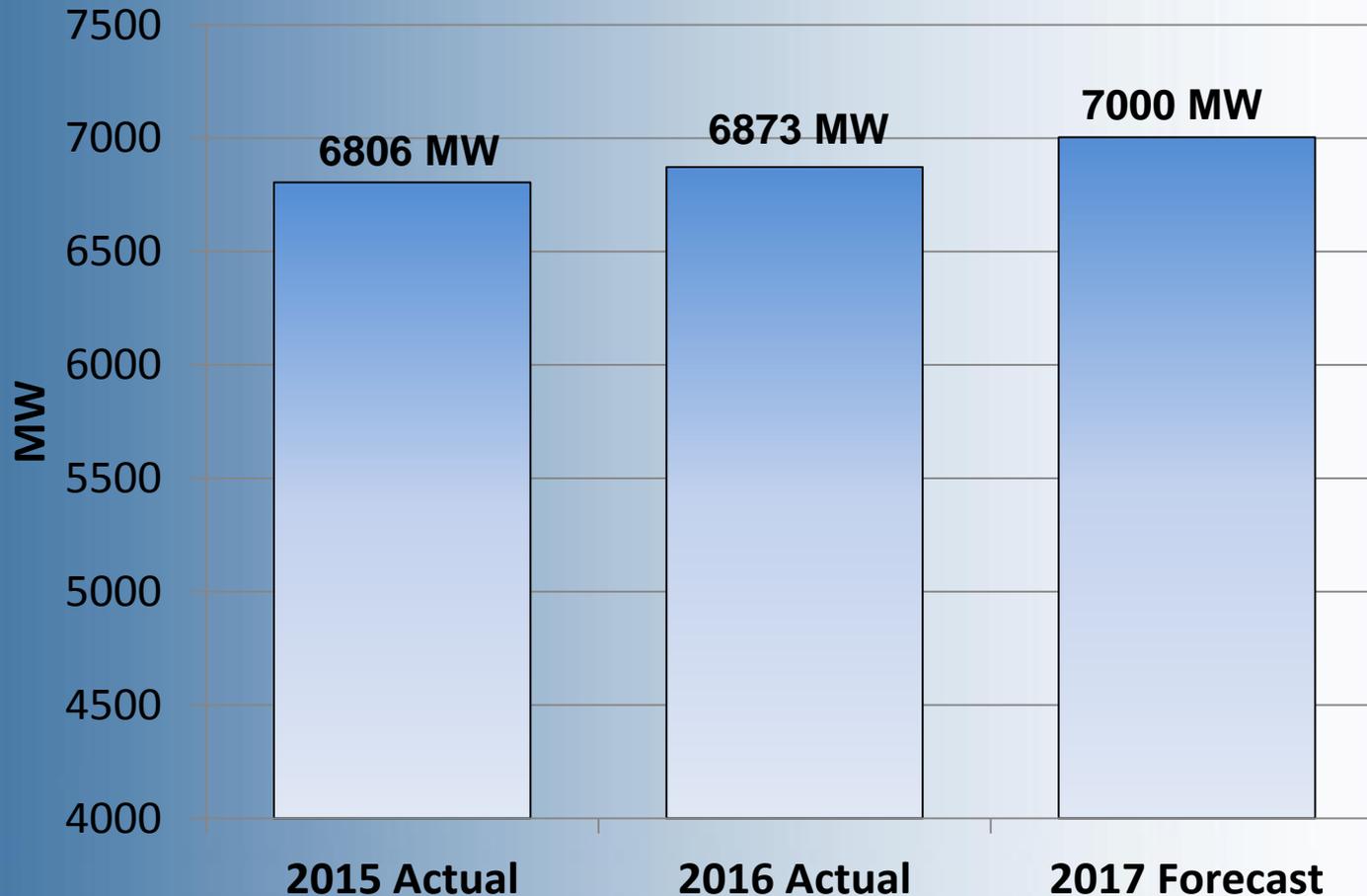
SRP's Electric Service Area



Summary

- Peak demand is expected to be higher than last year's actual peak.
- Adequate resources have been secured to meet anticipated demand.

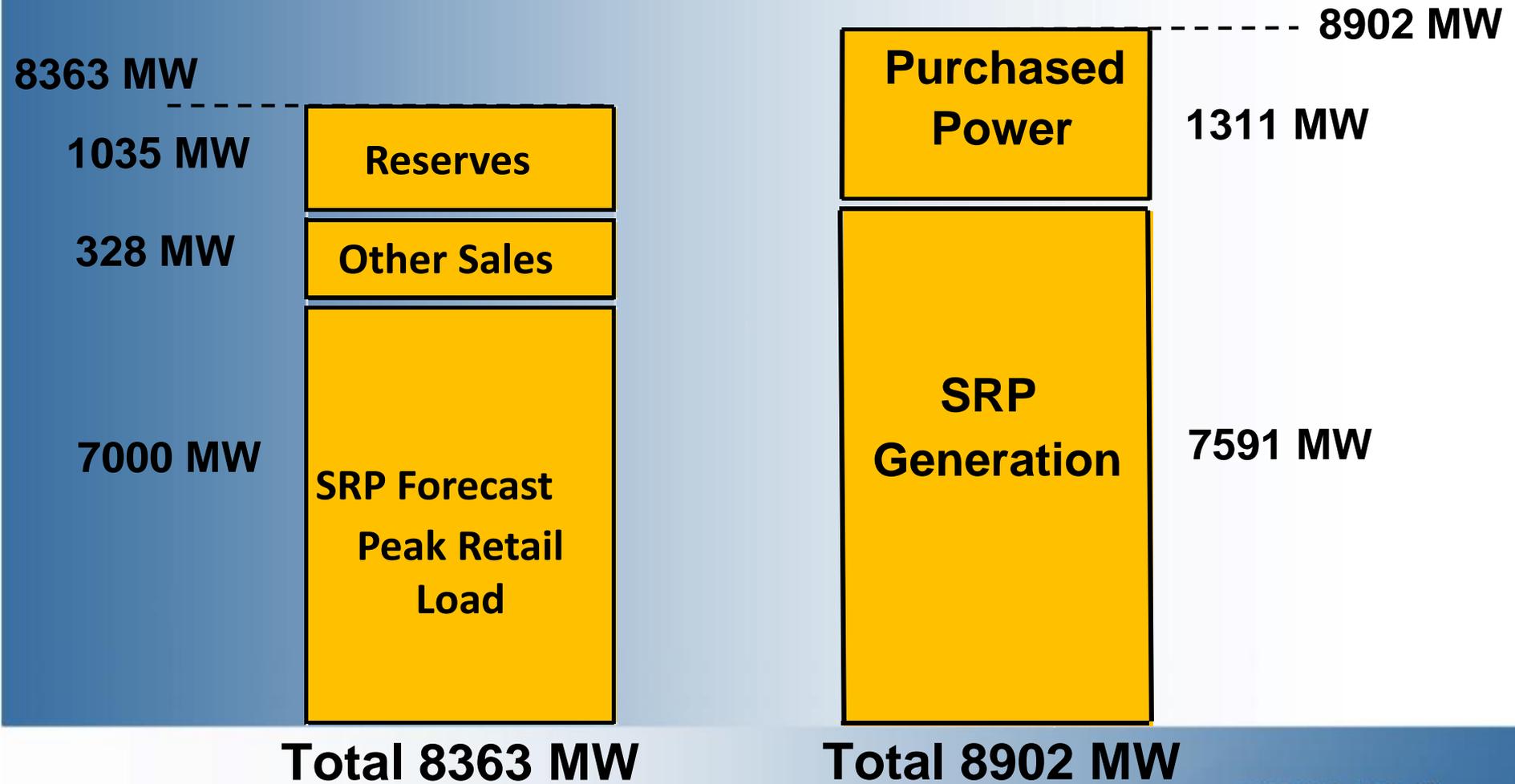
Peak Retail Load Forecast



Summer 2017 Outlook

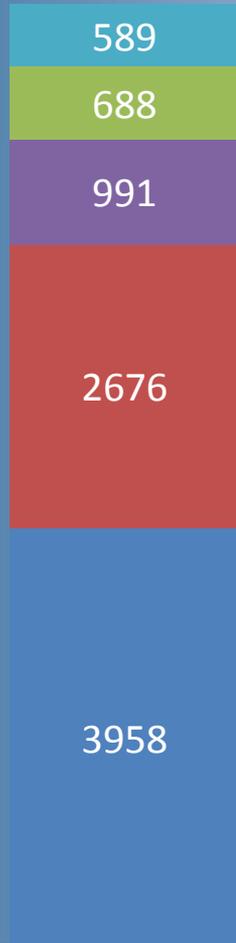
Expected
Need

Expected
Capability

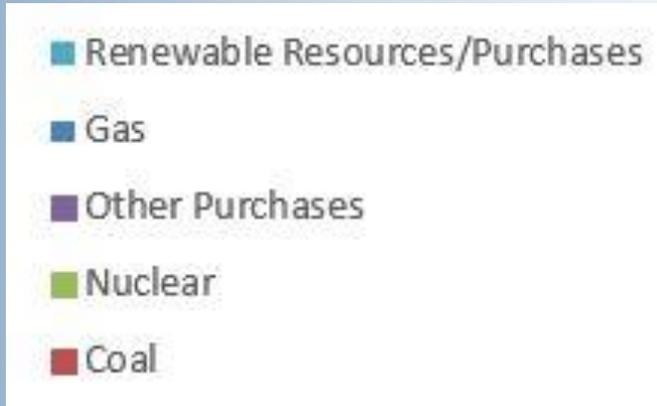


SRP 2017 Resources

Capacity (MW)



Energy (GWh)



Total 8902 MW

Total 30,114 GWh



Purchased Power

- Purchased power portfolio is in place to meet demand.
- Additional purchases may be needed to respond to multiple forced unit outages.
- Regional market conditions suggest that there will be sufficient capacity to meet the Arizona demand.

Fuel Status

- **Nuclear**
 - Full requirements under contract.
- **Coal**
 - Full requirements under contract.
 - Inventory at coal plants are at or above target levels.
- **Natural Gas**
 - Full transportation requirements are under contract with two pipelines.
 - Current supplies of natural gas are adequate.

Battery Storage RFP

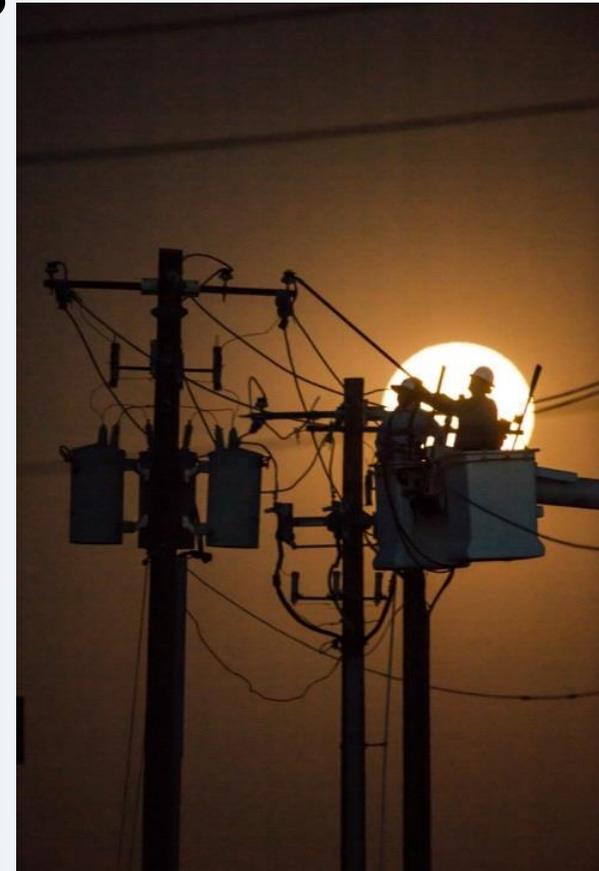
- **Purpose:**
 - Deploy grid-scale battery storage systems to meet peak demand and optimize solar output as pilot project
 - Obtain working experience with grid-scale battery storage system design, procurement, and operations
 - Be prepared when storage becomes a viable, economic option at large scale
 - Compare operational and economic tradeoffs between two storage systems
- **Design:**
 - 10MW stand-alone battery with 4 hours of storage charged from grid
 - 10MW battery with 4 hours of storage charged from 20MW of solar PV

Transmission & Distribution Overview

- Transmission and Distribution Systems are prepared for summer operations.
- The system has sufficient capacity to serve forecasted peak demand.

2017 Transmission Additions & Replacements

ADDITIONS	
Transmission Poles	4
Breakers (69 kV – 500 kV)	5
REPLACEMENTS	
Transmission Poles	412
Breakers (69 kV – 500 kV)	18



Additional Transmission Improvements

- Replaced 4 transformers as part of Proactive Transformer Replacement Program
- 1 New Distribution Bay to Support Load Growth
- 6 – 69 kV Transformer Protectors for Fault Isolation
- 16 New Sets Transformer Monitoring Equipment

System Preparation

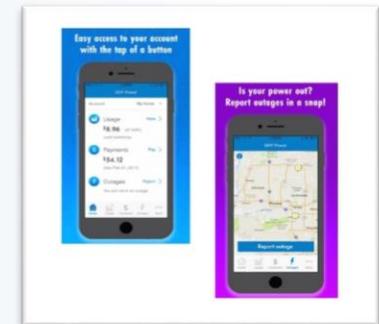
- Preventative maintenance
- Vegetation management
- Pole reinforcement
- Bushing replacement
- Cable replacement
- Spare equipment and material
- Wildfire coordination
- Line patrols/inspections
- Emergency training
- Blackstart training
- Operations coordination
- Storm planning
- Contingency mitigation

Reliability and Planning

- **Reliable System**
 - 2016 EPRI Technology Transfer Award
 - Grid Modernization and Asset Optimization
- **Planning for Reliable System**
 - Grid Performance
 - Operational Excellence

SRP - Outage Information Resources

- **Conversational Interactive Voice Response System**
 - Customers can easily report an outage with speech recognition or with an agent.
- **SRP App and Online**
 - Outage reporting and information.
- **Proactive Outage Notifications Via Text or Email**
 - Over 600,000 residential and 8,700 business customers enrolled.
- **Power Up**
 - Expanded outage workshops for business customers.



Summary of Year 2017 Projected Conditions

- Transmission, distribution, SRP generation and planned energy purchases are adequate to serve the forecasted summer 2017 demand.
- Forecasted 2017 demand is comparable to 2016 and is supported by a robust transmission system.
- Contingency plans are in place to handle emergency events.
- Proactive customer communication plan in place for outage situations.